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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,573

04/11/2006

Johannus Wilhelmus Weekamp

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

BOMKAMP, ERIC A

ART UNIT	PAPER NUMBER
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2826

MAIL DATE	DELIVERY MODE
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10/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/575,573

Applicant(s)

WEEKAMP ET AL.

Examiner

Eric A. Bomkamp

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.



Minhloan Tran
Primary Examiner
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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4-11-2006, 8/24/07.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4-12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Schwarzrock et al., US 6,605,828.
3. With respect to claim 1, Schwarzrock shows, a device wherein: the body is provided with a recess (24) extending from the first side to the second side, and a sectional area of the recess (24) on the second side is larger than a sectional area of the recess on the first side of the device (Fig. 3, and columns 3 and 4).
4. With respect to claim 2, Schwarzrock shows that at least a number of electric conductors comprise interconnect portions (101) and bonding pad portions (17), which bonding pad portions have a larger diameter than the interconnect portions and are ordered such that they are suitable for electric coupling with an electric element arranged on the first side (Fig. 3).
5. With respect to claim 4, Schwarzrock shows that the recess (24) is trapezoidal (Fig. 3).

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6. With respect to claim 5, Schwarzrock shows that a further electric element (100) is embedded in the body, which element is electrically coupled to a number of the electric conductors (Fig. 3).

7. With respect to claim 6, Schwarzrock shows that the conductors comprise a first (101), a second (18) and a third layer (17), the bonding pad portions being present in the third layer, and patterns in the second layer extending parallel to the first side having a smaller section than corresponding patterns in the first layer, and the electrically insulating material (20) extending into cavities between the patterns in the second layer, thereby mechanically anchoring the corresponding patterns in the first layer (Fig. 3).

8. With respect to claim 7, Schwarzrock shows device as claimed in claim 1, characterized in that the body comprises a first part (25), a second part (100) and a third part (19), wherein the recess (24) is situated in the first part, and the third part is situated between the first part and the second part, and is bent such that the second part extends substantially parallel to the first part, wherein an electric element (11) can be placed on the second part on the first side, such that a surface of the element is accessible via the recess in the first part (Fig. 3).

9. With respect to claim 8, Schwarzrock shows a first part (25, 16), a fourth part (100) and a fifth part (11), wherein the recess (24) is situated in the first part, and the fifth part is situated between the first part and the fourth part, and is bent such that the fourth part extends substantially parallel to the first part, which first and fourth parts enclose a channel which connects to the recess and is suitable for transporting a fluid (Fig. 3, column 2, lines 46-58).

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10. With respect to claim 9, Schwarzrock shows an electric element (100) attached to the first side of the device in a manner such that a surface of the element is accessible via the recess (24) in the body (Fig. 3).

11. With respect to claim 10, Schwarzrock shows that contact faces (101) are situated at the surface of the element, which contact faces are electrically connected to conductors (17) on the first side of the device by means (18) of connecting means, said contact faces and the portions of the conductors connected thereto being situated opposite each other and being separated from the part of the surface reached via the recess (Fig. 3).

12. With respect to claim 11, Schwarzrock shows a lid (26) on the second side of the device, the lid and the device enclosing a channel (25), which connects to the recess and is suitable for the transport of a fluid (Fig. 3).

13. With respect to claim 12, Schwarzrock shows a lid (26) on the second side of the device, the lid and the device enclosing a channel (25) which connects to the recess (24) and which is suitable for the transport of a fluid (Fig. 3).

14. With respect to claim 14, Schwarzrock shows an electric element comprising a surface having contact faces (101) and a functional portion (17), the contact faces and the functional portion being mutually separated by a partition (18) (Fig. 3).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarzrock in view of Bolken, US 2003/0038376.

18. With respect to claim 3, Schwarzrock fails to show that the bonding pad portions of the conductors are arranged in at least a circle around the recess, in such a manner that the electric element can be attached in a flip-chip orientation to the bonding pad portions by means of connecting means.

Bolken teaches a semiconductor die (12) that has bonding pads (16) arranged in at least a circle around a recess (26), so that the element may be attached in a flip-chip orientation (Fig. 1, paragraph [0026]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the bonding pads, as taught by Bolken, because it provides a stable electrical connection in between the two structures.

19. With respect to claim 15, Schwarzrock fails to show that the contact faces are arranged in at least one circle around the functional portion.

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Bolken teaches a semiconductor die (12) that has bonding pads (16) arranged in at least a circle around a recess (26), so that the element may be attached in a flip-chip orientation (Fig. 1, paragraph [0026]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the bonding pads, as taught by Bolken, because it provides a stable electrical connection in between the two structures.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarzrock.

20. With respect to claim 13, Schwarzrock fails to show a plurality of individual devices and corresponding lids are present, which can be separated into individual units in a joint separating step. But the disclosure describes the device as a component, which implies that it is one of many components in a system, having the same or different structures.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of individual devices because systems often require the use of more than one of the same component.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric A. Bomkamp whose telephone number is 571-270-1559. The examiner can normally be reached on Monday thru Friday 8:00AM-5:00PM E.S.T..

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Purvis can be reached at 571-272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

9-7-07

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